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SOIL PREPARATION FOR ROSES

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Roses have long been popular flowers for the home. They will grow well and produce beautiful flowers if given some upkeep and a few minutes care each week. Proper location, use of good soil, proper soil preparation and the correct use of fertilizers and soil amendments increase the ease of care and maintenance of rose plantings.

Location Of The Rose Bed

Roses require at least six hours of sun each day. They will grow and bloom with less sunlight but the plants tend to be tall and "leggy" and blossoms are fewer and the color is poor. The rose bed should be located to eliminate competition for plant nutrients and moisture from trees and shrubs. Be sure that the plants have adequate protection from the wind as this is a serious problem in most of Hawaii.

Soil Requirements

Roses are not fussy about their soil requirements. However, good drainage is necessary to provide adequate air for proper root development. Dig a hole to the depth of root development (18 inches) and fill with water. The water should all drain away in 1½ to 2 hours. If it drains within one hour drainage is too fast, if it requires more than two hours drainage is too slow and the location should be changed or drains installed.

The soil should be uniform in texture and organic content for the entire root depth. Layers of different textures, such as found in home gardens where "topsoil" has been brought in, cause severe difficulties in drainage and management of the soil.

The soil should be free of rocks or stones. These cause obstruction to the roots resulting in weak stunted plants. Other obstructions such as buried building materials, compact layers in the soil, etc. should be removed to provide adequate space for root development.

Soil reaction or pH should be 5.5 to 6.5. Some roses will grow at pH below this range and some in pH above. However, by adjusting the pH to the proper range many problems in nutrition and management may be eliminated.

Soil Preparation

Soils should be prepared 18 to 24 inches deep for maximum root development. The soil may be prepared by removing all of the soil from the bed area, mixing the necessary organic matter, fertilizers and other materials and replacing in the hole. It may be done also by removing the soil from one spade depth then adding the various materials to the surface and working down to another spade depth. This will be easier if the second spade depth has been loosened before this is done. The top spade depth is replaced and the various materials are added and mixed with that soil. Soil preparation should be done several weeks before planting to allow pH changes to occur, the manure or other additions to come to equilibrium with the soil to reduce danger of burning and to allow the soil to settle to form a good firm "seed" bed.

If the pH is too high add 1 lb/100 sq ft of powder sulfur for each one unit reduction in pH desired. Do not add more than 3 lb/100 sq ft at one time. To increase pH add 4 to 5 lbs/100 sq ft of ground coral for each one unit increase in pH desired. Several weeks are required for the pH adjustment after the sulfur or ground coral is added. Uniform mixing of these materials with the soil is necessary for best results.

Add composted cow manure, chicken manure or similar materials for organic matter. Add ¼ to 1/3 by volume of the total soil depth. One-half should be mixed with the lower spade depth and one-half with the upper spade depth if this method of preparation is used. If highly carbonaceous materials such as bagasse, leaves, sawdust, etc. are used add 1 cup of ammonium sulfate per bushel of the material added to the soil. This will supply the added nitrogen needed and reduce the danger of nitrogen deficiency when the roses are transplanted.

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Apply the recommended fertilizers and mix with the soil at the time of preparation. Add treble superphosphate at 2 to 2½ lb/100 sq ft or bone meal at twice this rate to supply phosphorus for the plant's needs. In addition apply either a special rose fertilizer, 8–12–8, or similar analysis at 2 to 2½ lb/100 sq ft. This provides the necessary plant nutrients for establishing a well-rooted, healthy rose plant.

Sterilization of the soil will reduce problems with nematodes, diseases, insects and weeds in the rose bed. Sterilization may be done by treating the soil with methyl bromide, ethylene dibromide or similar materials. The use of chemicals such as these require a permit, issued by the Hawaii State Department of Agriculture. Most lawn services and termite treatment companies will have these permits. The soil may also be sterilized by heating the soil to 180°F for a period of 30 minutes. This may be done with steam, dry heat or an electrical current passed through the soil. Steam is the only method that can be used with the soil in place. Soil sterilization should be done after all materials, except the fertilizer, have been mixed with soil, but before any plants are set out.

Proper preparation of the soil will provide a good rose bed and make it easier to manage for best growth of the plants. Stinting at this time will increase the expense of upkeep and labor during the life of the plant.

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